

1 LISTING OF THE CLAIMS

2 1 through 27 Canceled

3 28. (New) A clamping and/or braking device including:

- 4 (a) a base element, which is connected rigidly by means of at least two adjacent wall  
5 sections to a force-applying element, by means of which the generated clamping  
6 and/or braking forces can be transferred to an object,
- 7 (b) wherein the two or more adjacent wall sections define an essentially sealed  
8 pressure chamber that can be pressurized with positive pressure or negative  
9 pressure,
- 10 (c) wherein the two or more wall sections each have a bending region, which is  
11 resistant to tensile force and nevertheless can be bent elastically so that the bending  
12 regions form an elastic element between the base element and the force-applying  
13 element,
- 14 (d) wherein in the unpressurized built-in state of the clamping and/or braking device,  
15 the two or more wall sections exert a predetermined clamping and/or braking force  
16 on the object by means of the force-applying element, and
- 17 (e) wherein the two or more wall sections and their bending regions are shaped and  
18 dimensioned,
- 19 (i) so that when the pressure chamber is pressurized with positive pressure, as  
20 a result of an increase in the curvature of the bending regions, the clamping  
21 and/or braking forces that can be transferred by the force-applying element  
22 to the object are reduced or the force-applying element is moved in the

1 direction away from the base element or when the pressure chamber is  
2 pressurized with negative pressure, as a result of decreasing the curvature  
3 of the bending regions, the clamping and/or braking forces that can be  
4 transferred by the force-applying element to the object are increased or the  
5 force-applying element is moved in the direction towards the base element,  
6 or

7 (ii) so that in the reverse conditions, when the pressure chamber is pressurized  
8 with negative pressure, as a result of an increase in the curvature of the  
9 bending regions, the clamping and/or braking forces that can be transferred  
10 by the force-applying element to the object are reduced or the  
11 force-applying element is moved in the direction away from the base  
12 element or when the pressure chamber is pressurized with positive pressure,  
13 as a result of a decrease in the curvature of the bending regions, the  
14 clamping and/or braking forces that can be transferred by the  
15 force-applying element to the object are increased or the force-applying  
16 element is moved in the direction towards the base element.

17  
18 29. (New) The device of claim 28 wherein the bending regions run essentially parallel in the  
19 unpressurized state and preferably have a small spacing, which lies in the range from 0.1  
20 mm to 10 mm, preferably from 1 mm to 5 mm.

1 30. (New) The device of claim 28 wherein the wall sections are formed as separate parts and  
2 have an attachment region, with which the wall sections are connected, preferably  
3 pressure-tight, to the base element, or the attachment regions are shaped, such that they  
4 form the base part after being connected to each other, preferably in a pressure-tight way.  
5

6 31. (New) The device of claim 30 wherein the wall sections each have an attachment region  
7 bent at a right angle in the region of the base element and the attachment regions are  
8 connected preferably in a pressure-tight way to a base element, which runs essentially  
9 perpendicular to the bending regions and which preferably comprises a retaining plate.  
10

11 32. (New) The device of claim 28 wherein the wall sections are formed as separate parts and  
12 have an attachment region, with which the wall sections are connected preferably in a  
13 pressure-tight way to the force-applying element, or the attachment regions are formed  
14 such that they form the force-applying element after they are connected to each other  
15 preferably in a pressure-tight way.  
16

17 33. (New) The device of claim 28 wherein the pressure chamber is sealed at the side regions  
18 of the wall sections by means of lateral sealing elements, which are connected flush on  
19 these wall sections and which preferably consist of plastic or rubber.  
20

- 1     34.     (New) The device of claim 30 wherein a spacing and/or sealing element is inserted  
2           between the wall sections formed as separate parts in the region of the base element and/or  
3           the force-applying element.  
4
- 5     35.     (New) The device of claims 33 wherein projecting from the base element or  
6           force-applying element, a retaining arm for the concerned lateral sealing element extends  
7           in the direction towards the force-applying element or the base element, wherein the lateral  
8           sealing element is arranged preferably between the lateral end surfaces of the wall sections  
9           and the retaining arm.  
10
- 11    36.     (New) The device of claim 28 wherein the movement path of the bending movement of  
12           the bending regions of wall sections is limited by a mechanical stop when pressurized,  
13           wherein the stop is preferably connected to the base element.  
14
- 15    37.     (New) The device of claim 28 wherein several force-applying elements are connected to a  
16           base element each by means of two wall sections.  
17
- 18    38.     (New) The device of claim 28 wherein several pairs of wall sections, which each apply  
19           force with an end region on the base element and with another end region on the  
20           force-applying element, are provided between a base element and a force-applying  
21           element.

- 1 39. (New) The device of claim 37 wherein the base element is formed as a ring shape,  
2 preferably circular ring shape.  
3
- 4 40. (New) The device of claim 37 wherein the force-applying elements are arranged within the  
5 base element and preferably define a circular ring-shaped clamping region.  
6
- 7 41. (New) The device of claim 38 wherein the force-applying element is arranged within the  
8 base element and is formed as a ring, preferably circular ring shape and/or slotted.  
9
- 10 42. (New) The device of claim 37 wherein the pairs of wall sections each lie in a plane and are  
11 closely adjacent.  
12
- 13 43. (New) The device of claim 42 wherein the pairs of wall sections are formed by two wall  
14 elements, which are formed as ring-shaped, preferably radially slotted plates and are  
15 formed at least in the wall regions between the slots of the bending regions.  
16
- 17 44. (New) The device of claim 43 wherein an attachment region, which is connected to the  
18 corresponding force-applying element or which forms this element, is provided on each  
19 end region of the wall sections, and wherein the joining region of the wall elements forms  
20 another attachment region, which is connected to the base element or forms this element.  
21

1 45. (New) The device of claim 39 wherein two ring-shaped sealing elements, which form a  
2 common pressure chamber for the pairs of wall sections, are provided between the wall  
3 elements, wherein the sealing elements are held preferably in a sealed manner between the  
4 attachment regions of the wall elements.

5  
6 46. (New) The device of claim 37 wherein a tubular ring element, which forms a common  
7 pressure chamber for the pairs of wall sections, is provided between the bending regions of  
8 the wall elements.

9  
10 47. (New) The device of claims 37 wherein a wall element is made from a stack of several  
11 partial wall elements preferably formed identically.

12  
13 48. (New) The device of claim 37 wherein the base element is formed as an essentially closed,  
14 preferably two-part housing, in which the wall elements are received, wherein preferably  
15 inner wall sections of the housing limit a maximum bending of the bending regions of the  
16 wall sections.

17  
18 49. (New) The device of claim 48 wherein the ring-shaped, preferably slotted force-applying  
19 element is also held in the housing and guided with reference to its radial dimensional  
20 changes.

1     50.     (New) A clamping and/or braking device including:

- 2           (a)     a base element and a force-applying element, by means of which the generated  
3                   clamping and/or braking forces can be transferred to an object, as well as at least  
4                   two adjacent wall sections, which each apply force with an end region onto the  
5                   base element and the force-applying element,
- 6           (b)     wherein the two or more adjacent wall sections define an essentially sealed  
7                   pressure chamber that can be pressurized with pressure or negative pressure,
- 8           (c)     wherein the two or more wall sections each have a bending region, which is  
9                   resistant to tensile force and nevertheless can be bent elastically so that the bending  
10                  regions form an elastic element between the base element and the force-applying  
11                  element, and
- 12          (d)     in the unpressurized built-in state of the clamping and/or braking device, the two or  
13                  more wall sections exert a predetermined clamping and/or braking force on the  
14                  object by means of the force-applying element, and
- 15          (e)     wherein the two or more wall sections and their bending regions are shaped and  
16                  dimensioned,
- 17                  (i)     so that when the pressure chamber is pressurized with positive pressure, as  
18                          a result of an increase in the curvature of the bending regions, the clamping  
19                          and/or braking forces transferred by the force-applying element to the  
20                          object are reduced or the force-applying element is moved away from the  
21                          base element or when the pressure chamber is pressurized with negative  
22                          pressure, as a result of a decrease in the curvature of the bending regions,

the clamping and/or braking forces that can be transferred by the force-applying element to the object are increased or the force-applying element is moved in the direction towards the base element, or

(ii) so that in the reverse conditions, when the pressure chamber is pressurized with negative pressure, as a result of an increase in the curvature of the bending regions, the clamping and/or braking forces that can be transferred by the force-applying element to the object are reduced or the force-applying element is moved in the direction away from the base element or when the pressure chamber is pressurized with positive pressure as a result of a decrease in the curvature of the bending regions, the clamping and/or braking forces that can be transferred by the force-applying element to the object are increased or the force-applying element is moved in the direction towards the base element.